

IBM Docket No. RPS9-2001-0006

Appln. No. 09/896,771
Amdt. dated Sep. 26, 2005
Reply to Office Action of April 25, 2005
Docket No. 6169-235

Listing of Claims:

1. (Currently Amended) A method for integrated multi-channel retailing, comprising the steps of:

associating a plurality of message adaptors with corresponding retail integrated technology (IT) systems for processing common data in a plurality of retail channels[[.]]
~~said association forming a peer-to-peer network;~~

intercepting in said adaptors data processing messages generated in said corresponding retail IT systems;

converting in said adaptors said intercepted data processing messages to a common message format; [[and,]]

forwarding each converted data processing message to a data control point, said data control point generating a reformatted message for each forwarded message by reformatting each forwarded message in said data control point and forwarding each reformatted message to others of said retail IT systems at least one other data control point associated with a physical store location; and.

distributing reformatted messages from said at least one other data control point to a plurality of IT systems at said physical store location to enable an end user to access a plurality of functions at said physical store location, said plurality of functions comprising at least one of an at-store merchandise pickup, an at-store merchandise exchange, an at-store order status query, an at-store payment, an at-store change of customer information, an at-store use of customer loyalty points, and an at-store kiosk transaction.

2. (Original) The method of claim 1, wherein said common message format is a format based upon a user definable mark-up language.

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3. (Original) The method of claim 2, wherein said user definable mark-up language is the extensible markup language (XML).

4. (Currently Amended) The method of claim ~~[[1]]~~ 3, wherein said forwarding step further comprises the ~~[[steps]]~~ step of:

~~forwarding each converted data processing message to a data control point; and,
routing said forwarded messages in said data control point to said others of said
retail IT systems conveying XML messages from the data control point, said XML
messages being received by select ones of said retail IT systems.~~

5. (Original) The method of claim 1, further comprising the step of queuing said intercepted messages in message queues in said adaptors prior to converting said messages to a common data format.

6. (Original) The method of claim 1, further comprising the step of queuing said converted messages in message queues in said adaptors prior to forwarding said messages to said others of said retail IT systems.

7. (Currently Amended) A machine readable storage having stored thereon a computer program for integrating multi-channel retailing, said computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:

associating a plurality of message adaptors with corresponding retail integrated technology (IT) systems for processing common data in a plurality of retail channels, said association forming a peer-to-peer network;

intercepting in said adaptors data processing messages generated in said corresponding retail IT systems;

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converting in said adaptors said intercepted data processing messages to a common message format; [[and,]]

forwarding each converted data processing message to a data control point, said data control point generating a reformatted message for each forwarded message by reformatting each forwarded message in said data control point and forwarding each reformatted message to others of said retail IT systems at least one other data control point associated with a physical store location; and

distributing reformatted messages from said at least one other data control point to a plurality of IT systems at said physical store location to enable an end user to access a plurality of functions at said physical store location, said plurality of functions comprising at least one of an at-store merchandise pickup, an at-store merchandise exchange, an at-store order status query, an at-store payment, an at-store change of customer information, an at-store use of customer loyalty points, and an at-store kiosk transaction.

8. (Original) The machine readable storage of claim 7, wherein said common message format is a format based upon a user definable mark-up language.

9. (Original) The machine readable storage of claim 8, wherein said user definable mark-up language is the extensible markup language (XML).

10. (Currently Amended) The machine readable storage of claim [[7]] 9, wherein said forwarding step further comprises the [[steps]] step of:

~~forwarding each converted data processing message to a data control point; and;~~
~~routing said forwarded messages in said data control point to said others of said retail IT systems~~ conveying XML messages from the data control point, said XML messages being received by select ones of said retail IT systems.

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11. (Original) The machine readable storage of claim 7, further comprising the step of queuing said intercepted messages in message queues in said adaptors prior to converting said messages to a common data format.

12. (Original) The machine readable storage of claim 7, further comprising the step of queuing said converted messages in message queues in said adaptors prior to forwarding said messages to said others of said retail IT systems.

13. (Currently Amended) A method for integrated multi-channel retailing, comprising the steps of:

intercepting data processing messages in a retail information technology (IT) system for use in one type of retail channel;

formatting data in said intercepted messages using a user-definable markup language; [[and,]]

asynchronously communicating said formatted data to a data control point, said data control point generating a reformatted message for each forwarded message by reformatting each forwarded message in said data control point and forwarding each reformatted message to at least one other retail IT system for use in at least one other type of retail channel data control point associated with a physical store location; and,

distributing reformatted messages from said at least one other data control point to a plurality of IT systems at said physical store location to enable an end user to access a plurality of functions at said physical store location, said plurality of functions comprising at least one of an at-store merchandise pickup, an at-store merchandise exchange, an at-store order status query, an at-store payment, an at-store change of customer information, an at-store use of customer loyalty points, and an at-store kiosk transaction.

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14. (Original) The method of claim 13, wherein said user definable markup language is the extensible markup language (XML).

15. (Currently Amended) The method of claim 13, ~~wherein said asynchronously communicating step comprises~~ further comprising the [[steps]] step of:

~~asynchronously forwarding each converted data processing message to said data control point; and;~~

~~asynchronously routing said forwarded messages in said data control point to said others of said retail IT systems~~ conveying XML messages from the data control point, said XML messages being received by select ones of said retail IT systems.

16. (Original) The method of claim 13, wherein said step of asynchronously communicating said formatted data to at least one other retail IT system for use in at least one other type of retail channel step comprises the step of:

queuing said formatted messages in a message queue; and,

incrementally forwarding each said queued messages to said others of said retail IT systems.

17. (Currently Amended) A machine readable storage having stored thereon a computer program for integrating multi-channel retailing, said computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:

intercepting data processing messages in a retail information technology (IT) system for use in one type of retail channel;

formatting data in said intercepted messages using a user-definable markup language; [[and,]]

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asynchronously communicating said formatted data to ~~at least one other retail IT system for use in at least one other type of retail channel~~ a data control point, said data control point generating a reformatted message for each forwarded message by reformatting each forwarded message in said data control point and forwarding each reformatted message to at least one other data control point associated with a physical store location; and

distributing reformatted messages from said at least one other data control point to a plurality of IT systems at said physical store location to enable an end user to access a plurality of functions at said physical store location, said plurality of functions comprising at least one of an at-store merchandise pickup, an at-store merchandise exchange, an at-store order status query, an at-store payment, an at-store change of customer information, an at-store use of customer loyalty points, and an at-store kiosk transaction.

18. (Original) The machine readable storage of claim 17, wherein said user definable markup language is the extensible markup language (XML).

19. (Currently Amended) The machine readable storage of claim 17, wherein ~~said asynchronously communicating step comprises~~ further comprising the steps ~~step of:~~

~~asynchronously forwarding each converted data processing message to said data control point; and,~~

~~asynchronously routing said forwarded messages in said data control point to said others of said retail IT systems~~ conveying XML messages from the data control point, said XML messages being received by select ones of said retail IT systems.

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20. (Original) The machine readable storage of claim 17, wherein said step of asynchronously communicating said formatted data to at least one other retail IT system for use in at least one other type of retail channel step comprises the steps of:

queuing said formatted messages in a message queue; and,
incrementally forwarding each said queued messages to said others of said retail IT systems.

21. (Currently Amended) A method for integrated multi-channel retailing, comprising the steps of:

in a message adaptor associated with a retail information technology (IT) system, detecting a modification to common data in the retail IT system configured for use in a retail channel;

in the message adaptor, formatting a message encapsulating said detected modification to said common data and conveying said formatted message to a data control point for reformatting said formatted message and forwarding said formatted reformatted message to at least one other retail IT systems configured for use in other retail channels at least one other data control point associated with a physical store location; and,

~~in the message adaptor, receiving formatted messages which encapsulate modifications to common data, extracting said common data from the formatted message, formatting said extracted data to a format which can be processed in said other retail IT system configured for use in said one type of retail channel, and forwarding said formatted data to said retail IT system~~

distributing said reformatted message from said at least one other data control point to a plurality of IT systems at said physical store location to enable an end user to access a plurality of functions at said physical store location, said plurality of functions comprising at least one of an at-store merchandise pickup, an at-store merchandise

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exchange, an at-store order status query, an at-store payment, an at-store change of customer information, an at-store use of customer loyalty points, and an at-store kiosk transaction.

22. (Currently Amended) A machine readable storage having stored thereon a computer program for integrating multi-channel retailing, said computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:

in a message adaptor associated with a retail information technology (IT) system, detecting a modification to common data in the retail IT system configured for use in a retail channel;

in the message adaptor, formatting a message encapsulating said detected modification to said common data and conveying said formatted message to a data control point for reformatting said formatted message and forwarding said formatted reformatted message to at least one other retail IT systems configured for use in other retail channels at least one other data control point associated with a physical store location; and,

~~in the message adaptor, receiving formatted messages which encapsulate modifications to common data, extracting said common data from the formatted message; formatting said extracted data to a format which can be processed in said other retail IT system configured for use in said one type of retail channel, and forwarding said formatted data to said retail IT system~~

distributing said reformatted message from said at least one other data control point to a plurality of IT systems at said physical store location to enable an end user to access a plurality of functions at said physical store location, said plurality of functions comprising at least one of an at-store merchandise pickup, an at-store merchandise exchange, an at-store order status query, an at-store payment, an at-store change of

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customer information, an at-store use of customer loyalty points, and an at-store kiosk transaction.

23. (New) The method of Claim 1, wherein the at least one other data control point associated with a physical store location comprises a plurality of other data control points each associated with a different one of a plurality of physical store locations, and further comprising, and wherein an end user comprises a plurality of different end users each accessing at least one function at one of the plurality of physical store locations, the method further comprising each end user providing a message to one of the other data control points, each message then being conveyed by a respective one of the plurality of other data control points to the data control point.